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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/799,087	03/12/2004	Steve G. Bjorg	MS304865.01/MSFTP2198US	8511
27195 7590 07/11/2008 AMIN. TUROCY & CALVIN, LLP 24TH FLOOR, NATIONAL CITY CENTER 1900 EAST NINTH STREET CLEVELAND, OH 44114			EXAMINER CHANG, JUNGWON	
			ART UNIT 2154	PAPER NUMBER
			NOTIFICATION DATE 07/11/2008	DELIVERY MODE ELECTRONIC

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

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<b>Office Action Summary</b>	<b>Application No.</b> 10/799,087	<b>Applicant(s)</b> BJORG, STEVE G.	
	<b>Examiner</b> JUNGWON CHANG	<b>Art Unit</b> 2154	

**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --**

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 19 February 2008.
- 2a) ☒ This action is **FINAL**.                      2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-15 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-15 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)          | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____                                      |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)          | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____  | 6) <input type="checkbox"/> Other: _____                          |

### **DETAILED ACTION**

1. This action is in response to amendment filed on 2/19/08. Claims 1-15 are presented for examination.
2. This action is Final.
3. The specification is objected to as failing to provide proper antecedent basis for the claimed subject matter. See 37 CFR 1.75(d)(1) and MPEP § 608.01(o). Correction of the following is required: The term "computer readable medium" recited in claims 1 and 2 is not clearly defined in the Specification. Page 3, lines 17-26 and page 4, lines 6-13 of Specification merely state "computer readable medium" without clear description of what its definition is.

The computer readable medium must be physical structure which provides the functional descriptive material in usable form to permit the functionality to be realized with the computer.

### ***Claim Rejections - 35 USC § 112***

4. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

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5. Claims 1-5 rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

i. Claim 1 recites the limitation "the contents" in line 6. There is insufficient antecedent basis for this limitation in the claim.

ii. Claim 1 is not clearly indicated whether "node's neighbor" refers to the first node's neighbor or the second node's neighbor.

### ***Claim Rejections - 35 USC § 103***

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

7. Claims 1-3 are rejected under 35 U.S.C. 103(a) 35 U.S.C. 103(a) as being unpatentable over Becker (US 7,117,264), hereinafter Becker, in view of O'Mahony (US 2005/0025144).

8. As to claim 1, Becker discloses the invention as claimed, including a decentralized computing environment (col. 4, line 64 – col. 5, line 28), comprising:

a number of nodes (fig. 1; col. 4, lines 25-36), each node in the number of nodes being capable of being a neighboring node of other nodes in the number of nodes (col.

2, lines 6-14, "neighbor peer node"), each node being capable of querying the availability of neighboring nodes for a match, the match being formed when a first node queries the availability of a second node and the second node queries the availability of the first node (col. 1, lines 8-17; col. 2, lines 15-42, "query command may be forwarded from the current peer node to a predetermined number of neighbor peer nodes"; col. 9, lines 34-63, "broadcast a query message...send a response message to target device 114 indicating whether target device 112 has the file that target device 114 is seeking").

9. Although Becker discloses a state of the second node being set to true in the case of a match (col. 1, lines 8-17; col. 2, lines 15-42; col. 9, lines 34-63), Becker does not specifically disclose clearing the content of node's neighbors array or alternative data structure. O'Mahony discloses clearing the content of node's neighbors array or alternative data structure (page 3, 0039, "clear...only if...match"; page 4, 0052). It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the teachings of Becker and O'Mahony because O'Mahony's teaching would allow the system to indicate the success or failure of a matching discovery operation (O'Mahony, page 4, 0044).

10. As to claim 2, Becker discloses the decentralized computing environment of claim 1, wherein another match is formed when the first node queries the availability of the second node and the second node responds with a yes message (col. 9, lines 34-63, "broadcast a query message...send a response message to target device 114

*indicating whether* target device 112 has the file that target device 114 is seeking”).

11. As to claim 3, Becker discloses the decentralized computing environment of claim 1, wherein no match is formed when the first node queries the availability of the second node and the second node responds with a no message (col. 9, lines 34-63, “broadcast a query message...send a response message to target device 114 *indicating whether* target device 112 has the file that target device 114 is seeking”).

12. Claims 4-15 are rejected under 35 U.S.C. 103(a) as being unpatentable over Becker, O'Mahony, further in view of Shah-Heydari (US 2003/0126299).

13. As to claims 4 and 5, Becker discloses *a node that queries* the nodes to communicate to find a match (col. 1, lines 8-17; col. 2, lines 15-42, “query command may be forwarded from the current peer node to a predetermined number of neighbor peer nodes”; col. 9, lines 34-63, “broadcast a query message...send a response message to target device 114 indicating whether target device 112 has the file that target device 114 is seeking”). However, Becker does not specifically disclose an inviter that invites the number of nodes to communicate to find a match. Shah-Heydari discloses an inviter that invites the number of nodes to communicate to find a match (page 1, 0007, “invitation to become a child of a first adjacent node”; page 5, 0046, “upon receiving the invitation message”). It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the teachings of Becker

and Shah-Heydari because Shah-Heydari's inviting the number of node would dynamically reconfiguring the network by accepting the inviter's invitation (Shah-Heydari, page 5, 0050).

14. As to claim 6, Becker discloses the invention substantially as claimed, including a computer-implemented protocol for matching communicable nodes in a dynamic, decentralized computing environment, the protocol comprising:

querying nodes to communicate to find a match (col. 1, lines 8-17; col. 2, lines 15-42, "query command may be forwarded from the current peer node to a predetermined number of neighbor peer nodes"; col. 9, lines 34-63, "broadcast a query message...send a response message to target device 114 indicating whether target device 112 has the file that target device 114 is seeking");

discovering matching availability of nodes by sending availability messages (col. 7, line 65 – col. 8, line 11, "discovery data messages"; col. 17, lines 26-65, "sends a query to neighbor devices"); and

forming a match where upon sending another availability message from a first node to a second node, the second node sends a message selected from a group consisting of an availability message and a yes message (col. 1, lines 8-17; col. 2, lines 15-42, "query command may be forwarded from the current peer node to a predetermined number of neighbor peer nodes"; col. 9, lines 34-63, "broadcast a query message...send a response message to target device 114 indicating whether target device 112 has the file that target device 114 is seeking"; col. 17, lines 37-65).

15. Becker discloses *querying* the nodes to communicate to find a match. However, Becker does not specifically disclose an inviter that invites the number of nodes to communicate to find a match. Shah-Heydari discloses an inviter that invites the number of nodes to communicate to find a match (page 1, 0007, "invitation to become a child of a first adjacent node"; page 5, 0046, "upon receiving the invitation message"). It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the teachings of Becker and Shah-Heydari because Shah-Heydari's inviting the number of node would dynamically reconfiguring the network by accepting the inviter's invitation (Shah-Heydari, page 5, 0050).

Although Becker discloses a state of the second node being set to true in the case of a match (col. 1, lines 8-17; col. 2, lines 15-42; col. 9, lines 34-63), Becker does not specifically disclose clearing the content of node's neighbors array or alternative data structure. O'Mahony discloses clearing the content of node's neighbors array or alternative data structure (page 3, 0039, "clear...only if...match"; page 4, 0052). It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the teachings of Becker and O'Mahony because O'Mahony's teaching would allow the system to indicate the success or failure of a matching discovery operation (O'Mahony, page 4, 0044).

16. As to claims 7, it is rejected for the same reasons set forth in claim 6 above.



17. As to claims 8 and 9, Becker discloses receiving by the second node the availability message sent from the first node, the second node answering with a no message to the first node if the second node has already been matched to another node, otherwise, a taken state of the second node is set to true signifying that the second node being matched to the first node (608, fig. 6; col. 14, lines 14-17).

18. As to claim 10, Becker discloses further comprising setting a taken state of the first node to true signifying that the first node is matched to the second node (col. 1, lines 8-17; col. 2, lines 15-42, "query command may be forwarded from the current peer node to a predetermined number of neighbor peer nodes"; col. 9, lines 34-63, "broadcast a query message...send a response message to target device 114 indicating whether target device 112 has the file that target device 114 is seeking"; col. 17, lines 37-65).

19. As to claim 11, it is rejected for the same reasons set forth in claim 6 above. In addition, Becker discloses a computer-readable medium having computer-executable instructions for performing a method for matching communicable nodes in a dynamic (col. 18, lines 43-59).

20. As to claim 12, it is rejected for the same reasons set forth in claim 7 above.

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21. As to claims 13 and 14, they are rejected for the same reasons set forth in claims 8-9 above.

22. As to claim 15, it is rejected for the same reasons set forth in claim 10 above.

23. Applicant's arguments with respect to claims 1-15 have been considered but are moot in view of the new ground(s) of rejection.

24. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

25. Any inquiry concerning this communication or earlier communications from the

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examiner should be directed to Jungwon Chang whose telephone number is 571-272-3960. The examiner can normally be reached on 6:30-2:00 (Monday-Friday).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Nathan J. Flynn can be reached on 571-272-1915. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/JUNGWON CHANG/  
Primary Examiner, Art Unit 2154  
July 7, 2008